

PAPERS READ BEFORE THE SOCIETY FROM MARCH 1897
TO JANUARY 1898.

1897.

Mar. 12. On the mean motion of lunar perigee and node. E. W. Brown.

On the theoretical values of the secular accelerations in the lunar theory. E. W. Brown.

New double stars found at the Cape Observatory in 1896. Communicated by Dr. D. Gill.

Observations of comets and planets made with the Dun Echt refractor and wire micrometer at the Royal Observatory, Edinburgh, by Dr. J. Halm. Communicated by Dr. R. Copeland.

Micrometrical measures of double stars. W. Coleman.

The nuclei of a sun-spot. T. K. Mellor.

On a new binary of short period in the constellation *Dorado*. T. J. J. See.

Observations taken at Vadsö during the total eclipse of the Sun, 1896 August 9, by passengers of the S.S. *Neptun*. Drawn up and communicated by the Rev. T. C. Porter.

The orbit of δ *Cygni*. S. W. Burnham.

On the curve $y = \left\{ \frac{1}{x^2 + \sin^2 \psi} \right\}^{\frac{3}{2}}$, and its connection with an astronomical problem. Mrs. W. H. Young (Miss Grace Chisholm).

Discordances of index errors of the Madras Mural Circle during the years 1834 to 1842 inclusive. A. M. W. Downing.

On a photographic transit-circle. H. H. Turner.

Further proof of the rotation-period of *Venus*. Percival Lowell.

The spectrum of β *Lyrae* as observed at Stonyhurst College Observatory in 1895. Rev. W. Sidgreaves.

Cloud statistics for stations in India near the path of the Moon's shadow on 1898 January 21-22. A. M. W. Downing.

Feb. 1898.

Papers read before the Society.

233

Ephemeris for physical observations of *Mercury*. A. Marth.

Estimations of the magnitude of *Nova Aurigæ* made at the Radcliffe Observatory, Oxford. E. J. Stone.

Transit-circle observations of Comet Swift (1896 April 13) sub polo, made at the Radcliffe Observatory, Oxford. Communicated by E. J. Stone.

Attempt to photograph the *Leonids* in the open sky. Isaac Roberts.

Apr. 9. A new quadruple stellar system. R. T. A. Innes.

On the straightness of spider lines. H. H. Turner.

Observations of minor planet (8) *Flora* at Windsor, New South Wales. John Tebbutt.

The orbit of *Sirius*. S. W. Burnham.

Micrometrical measures of the double stars in the great nebula and cluster surrounding η *Carinæ*, made with the 24 inch refractor of the Lowell Observatory. T. J. J. See.

On some original observations of the comet of 1652. E. B. Knobel.

On the determination of the epoch-correction of an adopted system of right ascensions of clock stars from observations of the Sun, including the effects of personalities; and applications of the results to the determination of the errors of the tables of the Sun and Moon. E. J. Stone.

An investigation concerning the position error affecting eye estimates of star magnitudes. A. W. Roberts.

Proper motion of the southern short period variables *L Carinæ* and *K Pavonis*. A. W. Roberts.

On the apparent disc and on the shadow of an ellipsoid. A. Marth.

Observations of comets 1896 III. (Swift), and 1896 IV. (Sperra), made at the Radcliffe Observatory, Oxford. Communicated by E. J. Stone.

An improvement in winding equatorial clocks. A. F. Lindemann.

May 14. Preliminary note on a personal equation depending on magnitude affecting the right ascensions of the stars in the Cambridge Zone Catalogue of the *Astronomische Gesellschaft* and its determination from Astrographic Catalogue plates. A. R. Hinks.

Zodiacal radiants of fire-balls. W. F. Denning.

On a new binary star with a period of five and one half years. (β 883). T. J. J. See.

On the mean places and proper motions for 1900 of 24 southern circumpolar stars. David Gill.

On the determination of terrestrial longitudes by photography. Capt. E. H. Hills.

The orbit of μ *Draconis*. S. W. Burnham.

- Observations of comets Perrine 1896 Nov. 2, and Perrine 1896 Dec. 8, made at the Radcliffe Observatory, Oxford. Communicated by E. J. Stone.
- Cometary observations at the Liverpool Observatory, 1896. W. E. Plummer.
- On the various forms of personal equation in meridian transits of stars. T. H. Safford.
- June 11. Theory of the motion of the Moon. E. W. Brown.
- Note on the mean motions of the lunar perigee and node. E. W. Brown.
- Elements of comet Perrine (*f*) 1896, Nov. 2. C. J. Merfield.
- Nebula H I. 43 *Virginis*. K. D. Naegamvala.
- The expected shower of *Leonids* in 1897. W. F. Denning.
- Results of double star measures with the 8-inch equatorial at Windsor, New South Wales, in 1896. John Tebbutt.
- Notes on the reduction of stellar photographs. A. A. Rambaut.
- Photographic observations of comet (*b*) 1896. A. A. Rambaut.
- Ephemeris for physical observations of the Moon. A. Marth.
- On some spectroscopic determinations of velocity in the line of sight made at Cambridge Observatory. H. F. Newall.
- Nov. 12. The effect of the general illumination of the sky on the brightness of the field at the focus of a telescope. F. L. O. Wadsworth.
- A note on spider lines. F. L. O. Wadsworth.
- Catalogue No. 2 of nebulae discovered at the Lowe Observatory, Echo Mountain, California. Lewis Swift.
- Occultation of *Ceres* by the Moon on 1897 November 13, visible at Greenwich. Communicated by the Superintendent of the *Nautical Almanac*.
- Personality in measurements of photographs for the Astrographic Catalogue at the University Observatory, Oxford. H. H. Turner.
- Observations of *Jupiter* and *Jupiter's* satellites made at Mr. Crossley's Observatory, Bermerside, Halifax. J. Gledhill.
- Observations of the physical features of *Mars* made at Mr. Crossley's Observatory, Bermerside, Halifax, during the opposition 1896-97. J. Gledhill.
- Note on observations of *Venus* in 1897 (January to April), at Mr. Crossley's Observatory, Bermerside, Halifax. J. Gledhill.

- List No. 3 of nebulae discovered at the Lowe Observatory, Echo Mountain, California. Lewis Swift.
- On the nature of the orbit of γ *Lupi*. T. J. J. See.
- List No. 4, for 1900.0 of nebulae discovered at the Lowe Observatory, California. Lewis Swift.
- Equatorial Comparisons of *Uranus* with 41 *Librae*, and a probable occultation of the star by the planet. John Tebbutt.
- On the effect of chromatic dispersion of the atmosphere on the parallaxes of α *Centauri* and β *Orionis*; and on a method of determining its effect on the value of the solar parallax derived from heliometer observations of minor planets. David Gill.
- The great equatorial current of *Jupiter*. A. Stanley Williams.
- Approximate ephemeris of the *Leonids* from 1897 December 24 to 1898 April 8. G. Johnstone Stoney.
- A spectroscopic method for determining the second and third contacts during a total eclipse of the sun. William Shackleton.
- Occultation of the *Pleiades*, 1897 July 23. W. E. Plummer.
- Note on a result concerning diffraction phenomena used by Professor Wadsworth in several recently published papers. H. F. Newall.
- On the apparent diurnal motion of stars in relation to the adjustment of the polar axis of a telescope. C. Davidson.
- Observations of comet *b* 1897 (Perrine) at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.
- Dec. 10. Occultation of *Ceres* by the Moon on 1897 November 13, observed at the Hamburg Observatory. G. Rümker.
- Ephemeris for physical observations of *Jupiter*, 1897-98. A. C. D. Crommelin.
- A determination of the latitude variation and of the constant of aberration from observations made at the Royal Observatory, Cape of Good Hope, 1892-94. W. H. Finlay.
- The binary star *h* 5014. R. T. A. Innes.
- Mean areas and heliographic latitudes of sun-spots in the year 1895, deduced from photographs taken at the Royal Observatory, Greenwich, at Dehra Dûn (India), and in Mauritius. Communicated by the Astronomer Royal.
- Additional note on personal equation. T. H. Safford.
- Proper motions of the three close polar stars Groom-

bridge 1119, 2283, and 3548. Communicated by the Astronomer Royal.

Observations of meteors on 1897 November 13-15, made at the Radcliffe Observatory, Oxford. Communicated by the Radcliffe Observer.

Occultation of the planet *Ceres* by the Moon on 1897 November 13. Communicated by the Radcliffe Observer.

1898.

Jan. 14. The ternary system Lac. 7215=*h* 4935. R. T. A. Innes.

The double star ζ *Boötis*, Σ 1865. S. W. Burnham.

The orbit of O Σ 400. S. W. Burnham.

A note on the result concerning diffraction phenomena recently criticised by Mr. Newall. F. L. O. Wadsworth.

Observations of occultations of stars by the Moon, and of the phenomena of *Jupiter's* satellites, made in the year 1897 at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.

Occultations of the *Pleiades* by the Moon on 1897 July 23 and 1898 January 3, made at the Radcliffe Observatory, Oxford. Communicated by the Radcliffe Observer.

Ephemeris for physical observations of *Jupiter*, 1898. A. C. D. Crommelin.

On the parallax of *Sirius* and α *Gruis*. David Gill.